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In re application of: Makoto TANIGUCHI, et al
Serial No.: 09/047,717 Group No.: 1714
Filed: March 25, 1998 Examiner.: C. Shosho
For: INK COMPOSITION COMPRISING CATIONIC, WATER-SOLUBLE RESIN

Attorney Docket No.: U 011678-8

Commissioner for Patents
Washington, D.C. 20231

RESPONSE TO OFFICIAL ACTION

The Official Action of January 7, 2003 has been carefully considered and reconsideration of the application in view of the present submission is respectfully requested.

CERTIFICATION UNDER 37 C.F.R. 1.8(a) and 1.10*
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The courtesy of Examiner Callie Shosho in conducting a telephone interview with the undersigned on 4 June 2003 is noted with appreciation. The Interview Summary accurately reflects what transpired in the interview, as further detailed below.

The claims stand rejected under 35 USC 102(e) as allegedly being anticipated by Takizawa et al or under 35 USC 103(a) as allegedly being unpatentable over Takizawa et al either alone or in combination with Taniguchi et al or Yatake et al (see paragraphs 8-13 of the Official Action). Applicants respectfully traverse these rejections.

As discussed in the interview, the Takizawa et al reference, either alone or in combination with the other cited references, teaches away from the claimed **cationic** resin and cannot be used to render obvious the claimed invention for this reason alone. Specifically, the claims recite that the water-soluble resin comprising the repeating unit represented by formula (I) is cationic, whereas the resin described in Takizawa et al is amphoteric. As discussed in the interview, the claimed cationic resin, by definition, always collects at the negative pole when in liquid and subjected to an electric potential (regardless of the pH). The recitation "cationic resin" thus, by definition, precludes an ampholytic polymer which sometimes collects at the negative pole and sometimes collects at the positive pole depending on the pH.

The Examiner's position had been that, **at certain conditions**, the ampholytic

polymer does in fact function as a cationic polymer. However, the crucial point for present purposes is that **the ampholytic polymer will not function as a cationic polymer in all conditions.** An ink comprising the ampholytic polymer of the reference would behave differently in certain environments than an ink comprising the claimed cationic resin. So, for example, Takizawa describes at column 3, line 67 to column 4, line 12 how the ampholytic polymer behaves as a polymeric electrolyte having anionic characteristics in the ink at a certain pH. After the ink is ejected from a recording head and attaches to paper, the pH of the ink changes and this affects the behavior of the ink. This behavior is different than the behavior of an ink comprising a cationic resin which would not be affected by a change in pH. In other words, the ampholytic polymer of the reference would impart different properties to an ink than would the claimed cationic resin. This being the case, and since it is axiomatic that a compound and its properties are inseparable, it cannot be said that an ampholytic resin and a cationic resin are the same. Accordingly, the description in the reference of an ampholytic polymer cannot satisfy the requirement in the claims for a cationic resin. It is respectfully submitted that the rejections based on Takizawa et al should be withdrawn for this reason.

The claims also stand rejected under 35 USC 102(b) as allegedly being anticipated by Tomita et al or under 35 USC 103(a) as allegedly being unpatentable over Tomita et al in view of Taniguchi et al or over Soffel et al in view of Tomita et al. Applicants respectfully traverse these rejections.

In all of these rejections, the Examiner is relying upon Tomita et al as allegedly showing the claimed cationic resin. However, as discussed at the interview, Tomita et al encompass all polyamines containing primary amino groups in a proportion of 3-20% of amino groups contained in the molecule (see Tomita et al at claim 1). The Tomita et al Examples do not specify what polyamines are used therein and thus they could include any of the polyamines encompassed in this vast universe. The preferred examples listed in column 3, lines 30-55 include polymers that do not comprise the claimed repeating units and those that do, but only if the substituents (see Tomita et al at column 3, lines 52-55) are selected appropriately. Under these circumstances, it is respectfully submitted that there can be no question of an anticipation under 35 USC 102 or obviousness under 35 USC 103(a) (see *In re Baird*, 29 USPQ 2d 1550 (Fed. Cir. 1994)).

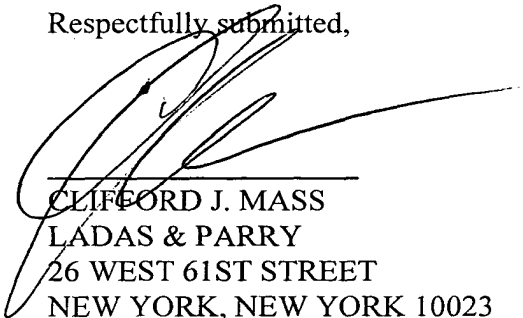
We specific respect to claims 71-72 and 75-76, Applicants respectfully note that the specification at page 3, last line and page 24, last paragraph (comparative example 2) provides a clear indication that the presence in the claimed resin of primary amino groups would change the basic and novel characteristics of the claimed invention. Accordingly, these claims are *a fortiori* patentable over the cited references, because the "consisting essentially of" transitional of these claims would preclude the 3-20% of primary amino groups that the reference teaches as necessary in the polyamines described therein.

In view of the above, it is respectfully believed that all rejections and

objections of record have been overcome and that the application is in allowable form.

An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,



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